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ABSTRACT

A review of the literature that examined the Wechsler Intelligence Scale for Children (WISC) profiles of retarded readers indicates that the populations studied and the criteria used for selection of retarded readers varied greatly from study to study. Rather than concluding that no WISC profile exists for individual retarded readers, researchers should consider conducting additional studies which are consistent in criteria of reading retardation and more stringent in research design. (Characteristics of 26 specific studies are outlined briefly in a table.) (AA)

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WISC Profiles of Retarded Readers: Another Look

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WISC Profiles of Retarded Readers: Another Look

In the past 25 years, numerous studies have appeared in the literature which examined the Wechsler Intelligence Scale for Children (WISC) subtest scores of retarded readers. The purposes of this paper are: (1) to briefly review this research, (2) to review the published critiques of this research, and (3) to evaluate the conclusions of these critiques.

A review of the literature that examined the WISC profiles of retarded readers indicates that the population studied and the criteria utilized for selection of retarded readers varied greatly from study to study (see Table 1).

Insert Table 1 about here

In some studies only males were included in the sample; in others, both males and females were included. The grade level of subjects varied from study to study. Furthermore, the classification of the subjects varied from under-achievers to dyslexic children. When one examines the criteria used to select each sample, the great disparity becomes clearer. Thus it is not surprising to discover that the results of these studies are somewhat contradictory (see Table 1).

Some reviewers (Huelsman, 1970; Kender, 1972) have interpreted these findings as indicative of the fact that no WISC profile exists for individual retarded readers. However, one must consider that this interpretation is based on the review of studies in which samples varied considerably. What appears to be needed are studies which carefully dilineate what is meant by a retarded reader. According to Spache (1976) a retarded reader: (1) is

retarded in a number of major reading skills, (2) is retarded by one year or more in the primary grades, by two years or more in grades four through eight, and by three years or more at the secondary level, (3) is retarded below that level necessary for full participation in the reading tasks of his age or grade or socioeconomic group, (4) has had normal opportunities for schooling, and (5) has continued to show this degree of retardation below his sociocultural peers despite corrective efforts. Clearly, the subjects in the studies reviewed did not all meet even some of Spache's criteria for retarded readers. Not knowing what specifically is being measured makes any obtained results less credible and almost impossible to compare and contrast with results obtained from other studies. To complicate matters even more, different instruments which measure a variety of reading skills, ranging from letter and word recognition to oral reading and comprehension, were used to determine reading level. Since the various tests do not measure the same skills, the results are not comparable.

The samples were, in many cases, small and, in some cases, self-selected. Some were retarded readers in a school population; others were retarded readers who had been referred for services outside of the school. Spache (1976) questioned the interpretation of subtest patterns when the subjects involved represented clinical populations rather than representing an entire population. The studies reviewed involved a large age span. Furthermore, several studies lacked any control groups. The subjects studied were somewhat different in regard to intellectual level, as well as in degree of reading retardation, a major problem discussed above.

At present, one cannot adequately answer the question: Is there a WISC profile characteristic of poor readers? First, the question needs to be rephrased to read: Are there specific WISC profiles characteristic of

children with each of a variety of types of reading problems? Thus, rather than abandon a search for WISC profiles perhaps we should consider conducting additional research, which is consistent in criteria of reading retardation and more stringent in research design. Only then will we be able to answer the question: Are there specific WISC profiles characteristic of children with each of a variety of types of reading problems?

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Table 1

WISC Profiles of Retarded Readers

Author(s) (Date)	Experimental Sample	Criteria for selection of experimental sample	Control Sample	Criteria for Selection of control sample	Findings
Graham (1952)	96 unsuccessful readers; ages 8-10 to 16-11; clinic population	V or P IQ of 90 or above on WISC and WRAT reading subtest score 25% or more below mean for grade level	none		Unsuccessful readers achieved scores below the mean on the A, DS, I, & V subtests and above the mean of the BD, C, OA, PA, PC, and S subtests.
Burks & Bruce (1955)	31 poor readers; grades 3-8; 5 girls and 26 boys	IQ of 90 or above on WISC and WRAT reading subtest score 1 year or more below grade level	11 good readers; grades 3-8; 6 girls and 5 boys.	IQ of 90 or above on WISC and WRAT reading subtest score 1 year or more above grade level	Poor readers scored significantly lower on the A, Cod, and I subtests and significantly higher on the BD, C, and PA subtests.
Altus (1956)	25 under-achievers, grades 3-8; 24 boys & 1 girl; school population	IQ of 80 or above on WISC and standardized reading test score 2 years or more below expected reading level	none		Underachievers scored significantly low on the A, Cod, and I subtests.
Spache (1957)	100 disabled readers; ages 6-9 to 16-0	I.N.A.	none		Disabled readers scored low on the Cod subtest and high on the C, PA, and PC subtests.
Sheldon & Garton (1959)	11 disabled readers; ages 7-0 to 14-8; 7 boys and 4 girls	I.N.A.	a matched control group	I.N.A.	Underachievers scored significantly lower on the A, Cod, and I Subtests.

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Table 1 (continued)

Dockwell (1960)	29 male retarded readers	GORT score 2 years or more below grade level	none		Retarded readers scored low on the A, Cod, & I Subtests and high on the PA & PC Subtest.
Hirst (1960)	30 remedial readers; ages 8-0 to 13-6; clinic population	FS IQ of 89 or above and reading level (measured by Chicago Silent Reading Test or Gates Advanced Primary Test) 6 months or more below MA	none		Disabled readers scored low on the A, Cod, & DS subtests and high on the OA, PA, & PC subtests.
Robeck (1960)	36 disabled readers	I.N.A.	none		Disabled readers scored low on the A, Cod, DS, & I subtests and high on the BD, C, DA, PA, PC, S, & V subtests.
Kallos, Grabow, & Guarino (1961)	37 male underachievers, ages 9 to 14, clinic population	IQ of 90-109 on WISC and Word Recognition & Word Analysis subtests of Durrell Analysis of Reading Difficulty two years or more below age-grade expectancy	none		Under achievers scored significantly below the mean on the A, Cod, & I subtests and significantly above the mean on the BD subtest.
Neville (1961)	35 male disabled readers; clinic population	IQ of 90 or above on WISC and reading score two years or more below grade level as estimated by an individually administered reading test	A matched control group who had been referred to the clinic for suspected reading problems but who did not appear to be disabled in reading	IQ of 90 or above on WISC	Disabled readers scored significantly below the mean on the A, DS, & I subtests and significantly above the mean on the BD & PA subtests.

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Table 1 (continued)

Coleman & Rasof (1963	126 under-achievers, ages 7-5 to 16-0; clinic population	CAT or SAT score one or more years below age-grade expectancy	20 achievers; ages 7-5 to 16-0	CAT or SAT score one or more years above age-grade expectancy	Underachievers scored significantly lower on the A, Cod, DS, & I subtests and significantly higher on the BD, C, PC, & V subtests.
Robeck (1963)	20 subjects having difficulty in word attack; ages 7-12; clinic population	Average or above average IQ	none		Subjects scored low on the A, Cod, DS, & I subtests and high on the BD, C, PA, PC, S, & V subtests.
McLean (1954)	21 disabled readers; ages 10-12; school population	Average IQ and two years or more below expected reading level	none		Disabled readers scored high on the PC subtest.
Robeck (1964)	80 poor readers; ages 6-10 to 13-9; 68 boys & 12 girls; clinic population	I.N.A.	WISC standardization sample		Poor readers scored significantly lower on the A, Cod, DS, & I subtests and significantly higher on the BD, C, PC, S, & V subtests.
McLeod (1965)	116 disabled readers (Australian); 85 boys & 31 girls; referred for remedial education	One and one-half or more years below expected reading level	177 adequate readers (English); 100 boys & 77 girls.	I.N.A.	Disabled readers scored lower than control group on the A, Cod, DS, I, & V subtests and higher than control group on the PC subtest.

Table 1 (Continued)

Belmont & Birch (1966)	150 male retarded readers, ages 9-10	IQ of 90 or above and score below the 10th percentile on three or four of the following tests: MAT: Word knowledge, Word Discrimination, & Reading, and a British sentence reading test	50 male normal readers; ages 9-10	IQ of 90 or above and did not meet the criteria stated for the experimental group	Disabled readers scored significantly lower on the A, I, OA, & V subtests.
Reid (1966)	87 male below average readers; ages 9-3 to to 10-7; school population	IQ of 90-110 on WISC and Iowa Test of Basic Skills, Reading section score in lowest quartile	average and above average readers	IQ of 90-110 on WISC and Iowa Test of Basic Skills, Reading section score above lowest quartile	Below average readers scored relatively poorly on the A & DS subtests and relatively well on the PC subtest.
Corwin (1967)	30 poor readers; grades 4 & 5	Non-verbal IQ score	a control group (N= 30) matched for age, grade, & non-verbal IQ	Non-verbal IQ score	Poor readers scored significantly lower than control group on the A, Cod, DS, & I subtests.
Beck (1968)	71 retarded readers; ages 9 to 11; 14 girls & 57 boys; clinic population	Chicago Reading Test or Gates Survey Test score one-half grade or more below grade expectancy	none		Retarded readers scored low on the A & DS and Cod (boys only) subtests.
Silberberg & Feldt (1968)	146 retarded readers;grades 1-3; referred for psychological evaluations	I.N.A.	none		No characteristic WISC subtest profile for retarded readers.

Table 1 (Continued)

Dahlke (1969)	62 retarded readers; grades 1-8, 52 boys & 10 girls; clinic population	IQ for 90 or above on WISC and poor performance on Diagnostic Reading Scales	none		No characteristic WISC subtest profile for retarded readers.
Lyle & Goyen (1969)	54 male retarded readers; grades 1-6	V or P IQ of 90 or above on WISC and Schonell Graded Word Reading Test score Grade / # Years Retarded 1 / ½ 2 / 1 3 / 1½ 4 / 2 5 / 2½ 6 / 3	54 male adequate achievers; grades 1-6	V or P IQ or 90 or above on WISC and achieving adequately in word recognition	Retarded readers scored significantly lower on the A, Cod, & I subtests and significantly higher on the BD, C, & PA subtests.
Huelsman (1970)	101 underachievers; grade 4	Gates Reading Survey score 1½ years or below age expectancy	56 achievers grade 4	Gates Reading Survey score 2 months or more above age expectancy	None of the101 underachievers scored significantly low on the A, Cod, & I subtests. Only six of the 101 underachievers scored significantly low on two of these subtests. 64% of the 101 underachievers failed to score significantly low on one of these three subtests. Of the 56 achievers, none scored significantly low on two or all three subtests and 89% of the achievers failed to score significantly low on one of these three subtests.

Table 1 (Continued)

Huelsman (Continued)					While groups of disabled readers tend to show a characteristic WISC profile individual disabled readers seldom, if ever, show the complete profile.
Ackerman, Peters & Dykman (1971)	82 learning disabled males; ages 8-11	GORT, Metropolitan, or Iowa Test of Basic Skills score of one year or more below grade level	34 academically adequate males; ages 8-11	No serious problem in achievement as determined by teacher	Learning disabled subjects scored significantly lower than control group on the A, DS, I & S subtests.
Bush & Mattson (1973)	36 normal IQ underachievers and 28 gifted unachievers	Failure by grade or subject and WRAT reading and spelling discrepant standard scores of 14 points and arithmetic discrepant score of 12 points below WISC FS IQ	22 normal IQ achievers & 23 gifted achievers	Did not meet criteria stated for experimental group	Underachievers scored significantly lower on the A, DS, and I (normal IQ only) subtests.
Ramanauskas & Burrow (1973)	31 intellectually average poor readers, MA 9-10 22 mentally retarded poor readers; MA 9-10	Gates-McKillop Reading Diagnostic Tests: Oral Reading subtest score 2 years or more below MA expectancy	31 intellectually average good readers; MA 9-10 13 mentally retarded good readers; MA 9-10	Gates-McKillop Reading Diagnostic Tests: Oral Reading Subtest score approximating or exceeding MA expectancy	Poor readers of average intellectual ability scored low on the Cod & I subtests & high on the OA subtest.. Poor readers of significantly below average intellectual ability scored low on the A, DS, I, & V subtests.

Table 1 (Continued)

Code:
Criteria for selection:
IQ = intelligence
V = verbal
P = performance
WISC = Wechsler Intelligence Scale for Children
WRAT = Wide Range Achievement Test
GORT = Gray Oral Reading Test
CAT = California Achievement Test
SAT = Stanford Achievement Test
MAT = Metropolitan Achievement Test
I.N.A. = Information not available

Findings:
WISC subtests:
A = Arithmetic
BD = Block Design
C = Comprehension
Cod = Coding
DS = Digit Span
I = Information
OA = Object Assembly
PA = Picture Arrangement
PC = Picture Completion
S = Similarities
V = Vocabulary

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